

FIG. 1
Background Art

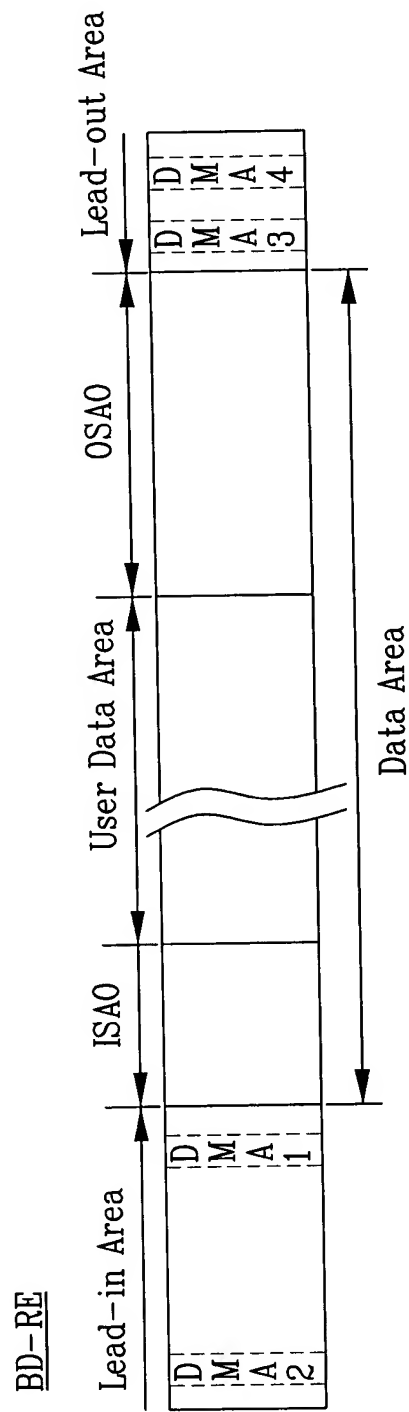


FIG. 2

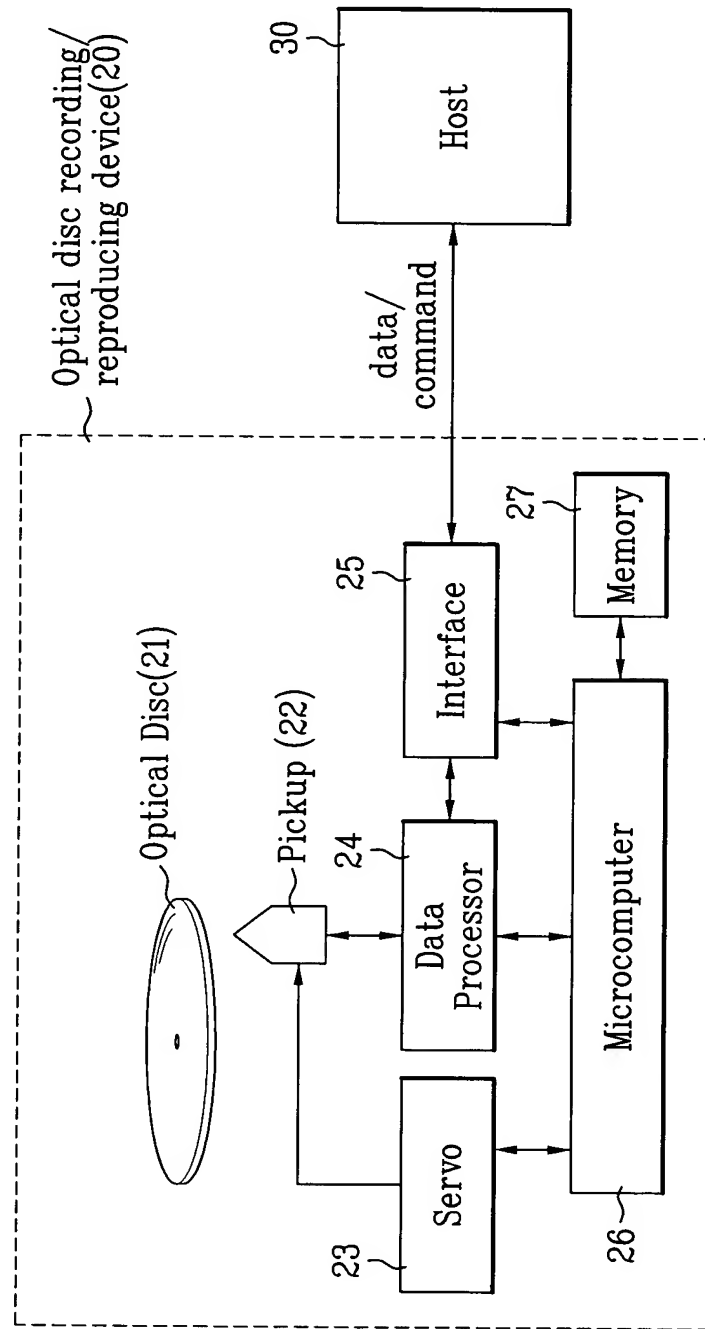


FIG. 3

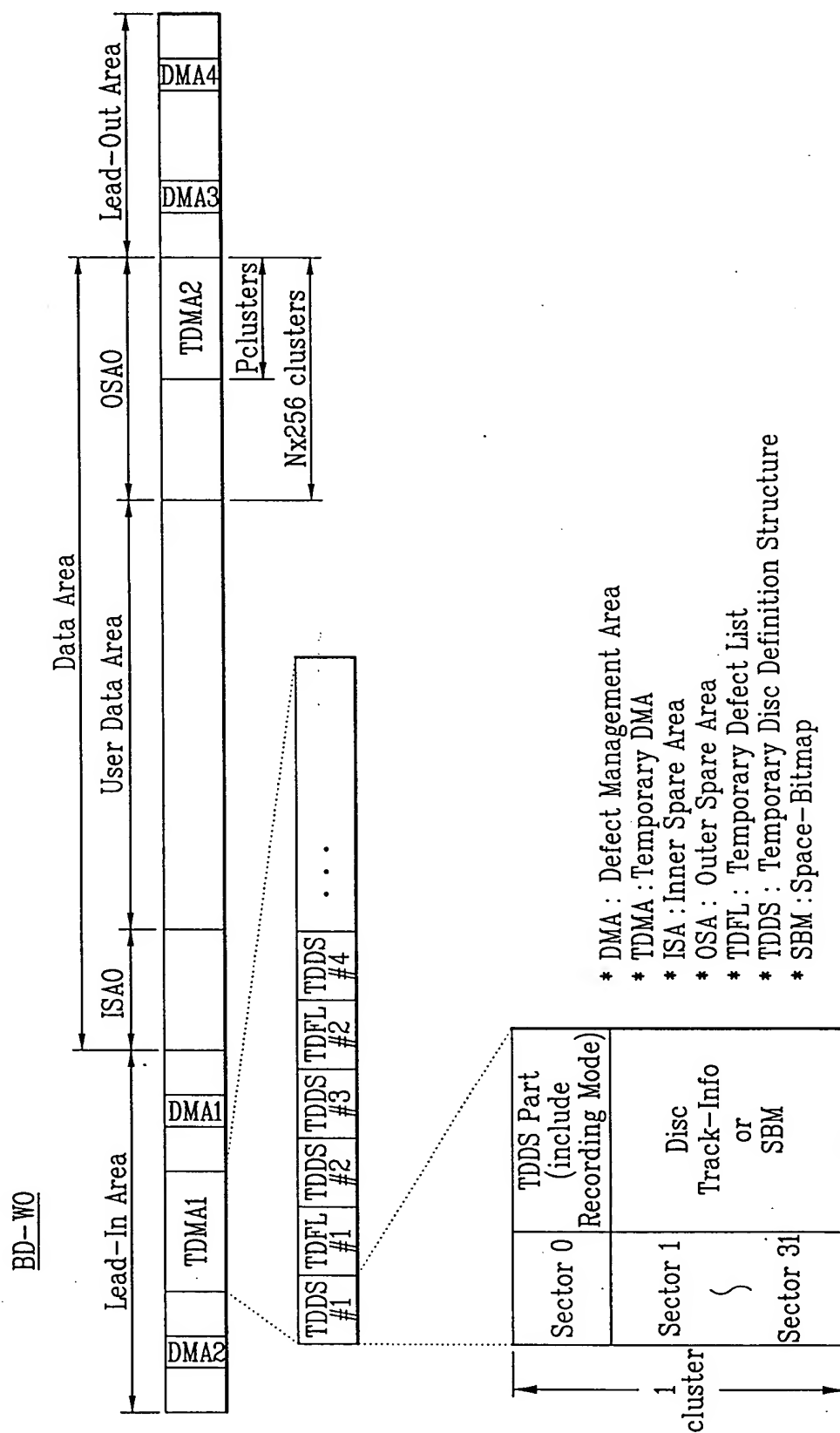
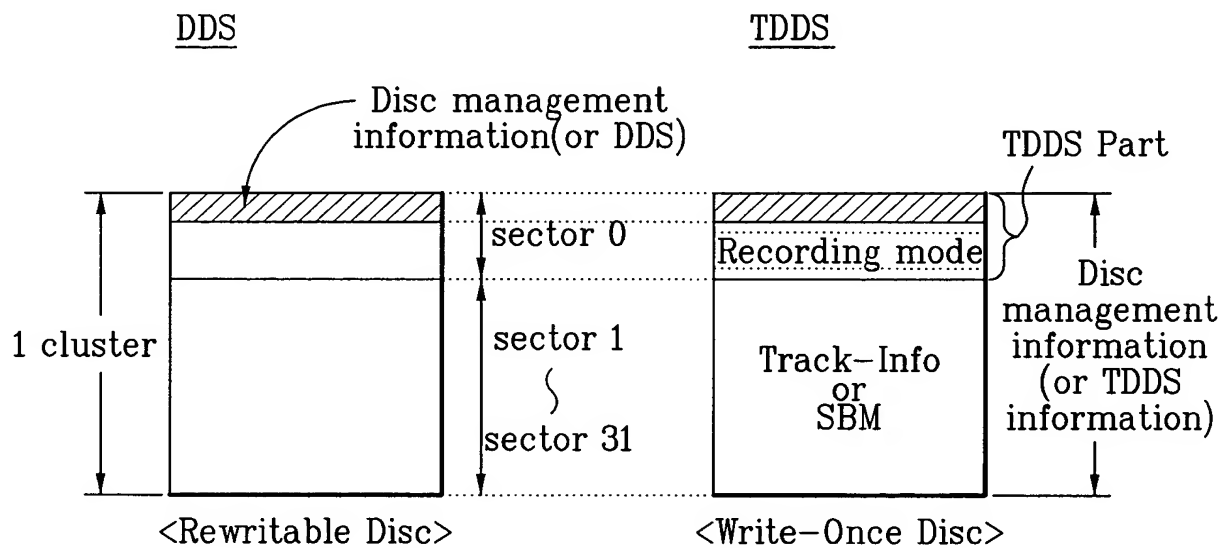


FIG. 4



* Recording mode

- 0000 0000b : Sequential Recording
- 0000 0001b : Random Recording

FIG. 5

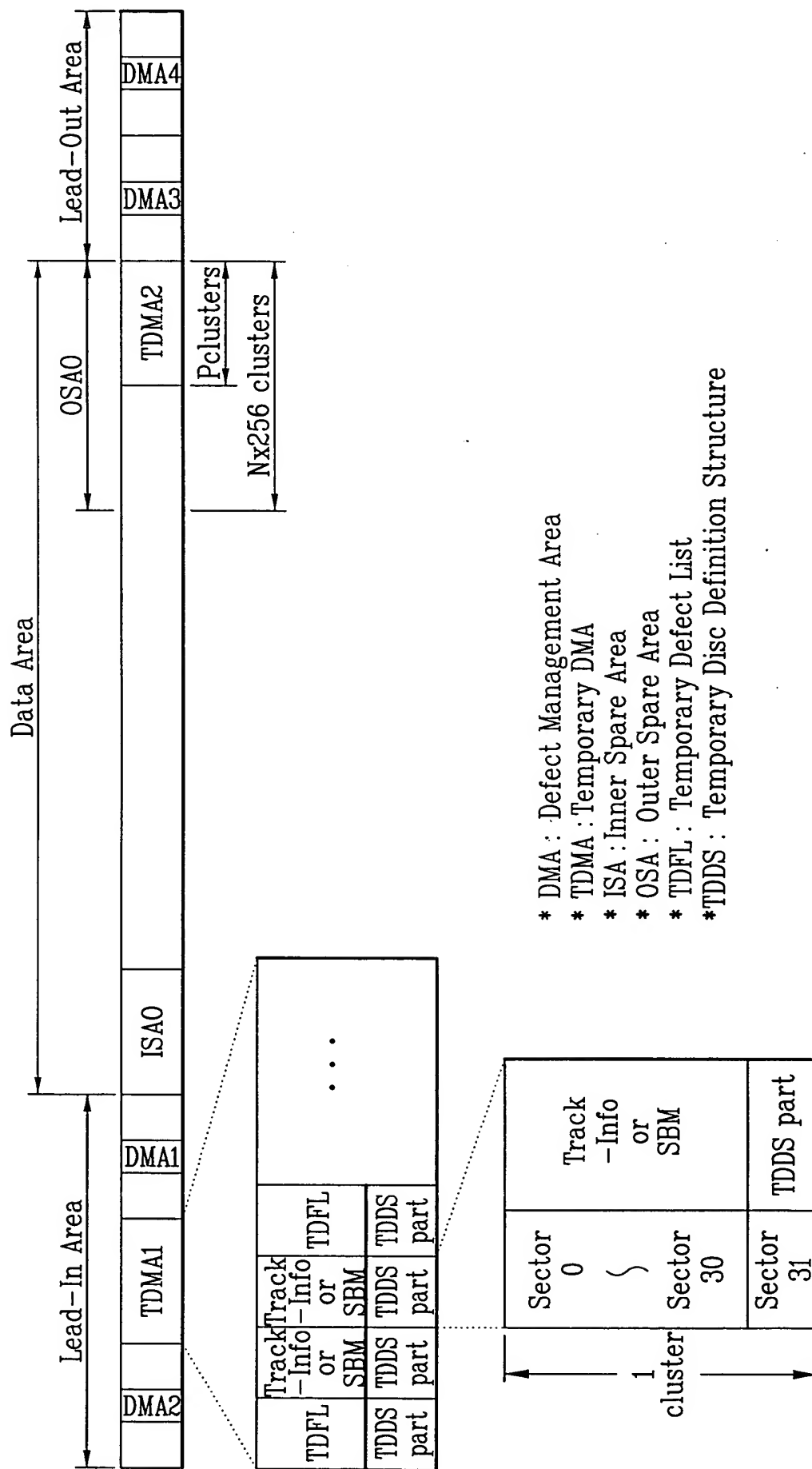


FIG. 6A

Single Layer BD-WO

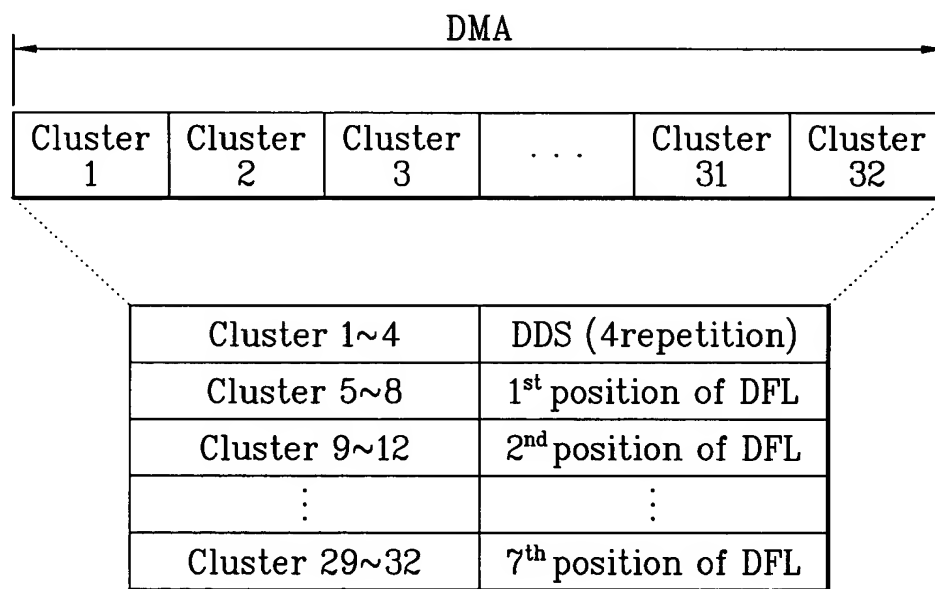


FIG. 6B

| | |
|------------------|---------------------------------|
| Clusters 1 ~ 4 | DO & TO (4 repetitions) |
| Clusters 5 ~ 8 | 1 st position of DFL |
| Clusters 9 ~ 12 | 2 nd position of DFL |
| ⋮ | ⋮ |
| Clusters 29 ~ 32 | 7 th position of DFL |

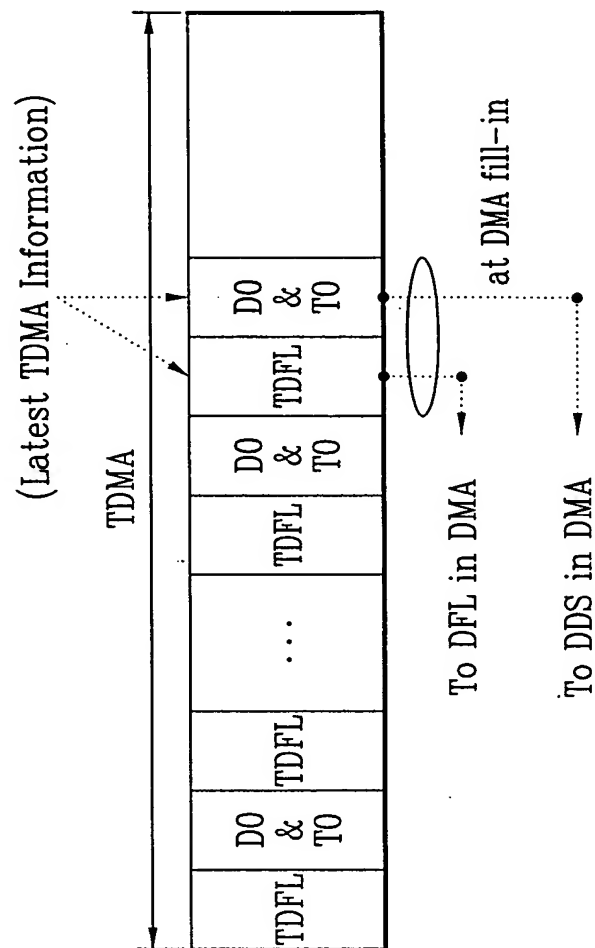
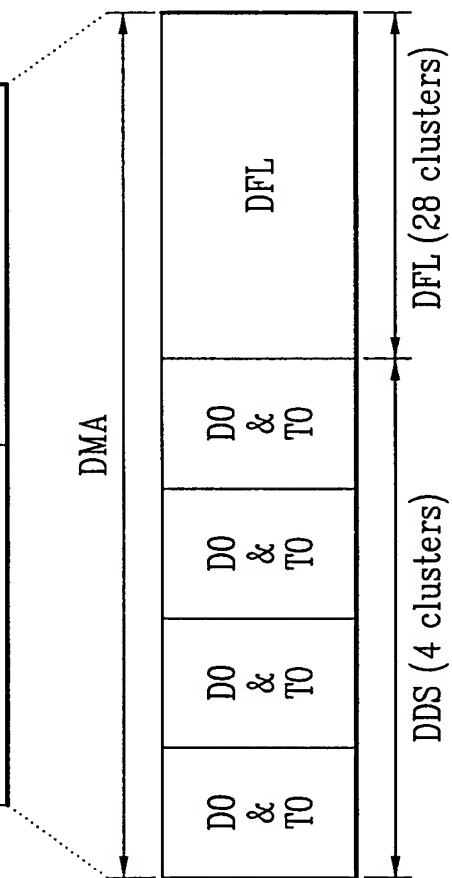


FIG. 6C

Dual Layer BD-WO

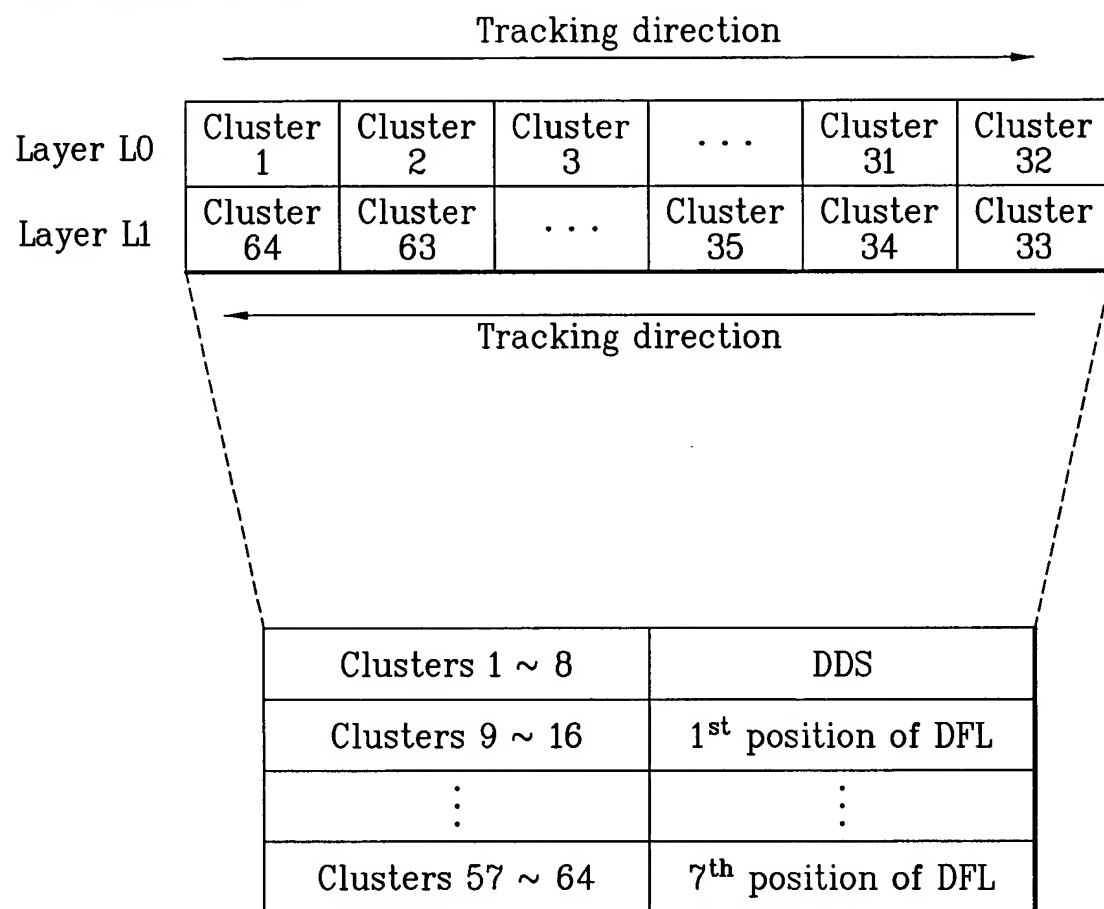


FIG. 7

| | DMA fill-in timing | contents | Location in DMA |
|---------------------|-----------------------|-----------------------|-----------------|
| 50a | No more record | Latest TDDS & TDFL | DDS & DFL |
| Finalization 50b | TDMA Full | Latest TDDS & TDFL | DDS & DFL |
| 50c | User selection | Latest TDDS & TDFL | DDS & DFL |

FIG. 8

| | DMA fill-in timing | contents | Location in DMA |
|---------------------|-----------------------|---|-----------------|
| 50d | Non D.M | Predetermined Value (ex,zero padding) | DFL |
| 50a | No more record | Latest TDDS | DDS |
| Finalization 50b | TDMA Full | Latest TDDS | DDS |
| 50c | User selection | Latest TDDS | DDS |

- D.M : Defect Management
- DMA : Defect Management Area

FIG. 9A

| | DMA fill-in timing | contents | Location in DMA |
|-----|---|-----------------------|------------------|
| 50e | No more record But Spare & TDMA left | Latest TDDS & TDFL | Part of DMA |
| 50b | TDMA Full | Latest TDDS & TDFL | Remainder of DMA |
| 50c | User selection | Latest TDDS & TDFL | Remainder of DMA |

Finalization {

- D.M : Defect Management
- DMA : Defect Management Area

FIG. 9B

| | |
|------------------|--|
| Clusters 1 ~ 2 | DDS (before Finalization) |
| Clusters 3 ~ 4 | DDS (at Finalization) |
| Clusters 5 ~ 8 | DFL (before Finalization) |
| Clusters 9 ~ 12 | 1st position of DFL (at Finalization) |
| ⋮ | ⋮ |
| Clusters 29 ~ 32 | 6th position of DFL (at Finalization) |

FIG. 10

| (T)DDS status flag (1byte) in DMA/TDMA | |
|--|--|
| 0000 0000 | In DMA, after User select finalization |
| 0000 1111 | In DMA, after no more record |
| 1111 0000 | In DMA, after TDMA Full |
| 1111 1111 | In TDMA, before finalization |